



ISS-11A / STS-113 Flight Readiness Review

KSC International Space Station / Payload Processing Directorate



ISS-11A



P1 Integrated Truss Segment Micromechanical Systems Based Pico-Satellite Inspector (MEPSI)



Agenda

- | | |
|--|---------------|
| ● Acronyms | In Back-Up |
| ● Hardware Images | To Be Briefed |
| ● Processing Milestones | To Be Briefed |
| ● Master Milestone Schedule | In Back-Up |
| ● Middeck Experiment Requirements | To Be Briefed |
| ● P1 / MEPSI Launch Delay Requirements | None |
| ● Engineering Status | To Be Briefed |
| ● Issues / Concerns | None |
| ● Certificate of Flight Readiness Exceptions | None |
| ● Readiness Certification | To Be Briefed |
-



P1 Integrated Truss Segment





MEPSI



PICO-Satellites (1.9 pounds and 4 x 4 x 5 inches each)



Launcher Assembly



Processing Milestones

● P1 Arrival at KSC	26 July 2000	(A)
● MEIT 2 Complete	25 June 2001	(A)
● MEIT 2 Regression Complete	15 March 2002	(A)
● P1 Radiator Re-installation	23 April 2002	(A)
● P1 Ammonia Load	17 May 2002	(A)
● P1 NTA Pressurization and Top-off	08 June 2002	(A)
● P1 Interim Weight and C.G. Determination	21 June 2002	(A)
● P1 PMA Re-installation	24 Jun 2002	(A)
● P1 Acceptance Test Complete	03 July 2002	(A)
● P1 ATCS Closeouts Complete	10 July 2002	(A)
● P1MDM Flight Software Load / PSLIT	12 July 2002	(A)
● P1 CETA Cart Installation	15 July 2002	(A)
● P1 Radiator Cinch Strap NSI Installation (14 of 18)	25 July 2002	(A)
● P1 Ready for Shuttle Integration	09 August 2002	(A)
● P1 Final ICD Walkdown	22 August 2002	(A)
● P1 Crew Equipment Interface Test	24 August 2002	(A)
● P1 Final Weight & C.G. / Canister Installation	3 October 2002	(A)
● Rotate Canister to Vertical	4 October 2002	(A)
● MEPSI Arrival at KSC	7 October 2002	(A)



Processing Milestones

Pad A

- | | | |
|---|------------------|-----|
| ● P1 to Pad | 10 October 2002 | (A) |
| ● P1 Radiator Cinch Strap NSI Installation (last 4) | 11 October 2002 | (A) |
| ● Launch Vehicle to Pad | 12 October 2002 | (A) |
| ● MEPSI to Pad | 14 October 2002 | (A) |
| ● MEPSI Orbiter Installation / IVT / Closeouts | 14 October 2002 | (A) |
| ● P1 Orbiter Installation | 15 October 2002 | (A) |
| ● P1 Grapple Fixture Installation | 16 October 2002 | (A) |
| ● P1 Closeouts | 17 October 2002 | (A) |
| ● Close Payload Bay Doors for Flight | 18 October 2002 | (A) |
| ● Late Middeck Experiment Stow | 9 November 2002 | |
| ● Launch | 10 November 2002 | |



Middeck Experiment Requirements

Payload (Up)

CSLM-2 SPU/SCA
InSPACE Coil Assemblies
PCG-STES #10
ZCG Clear Autoclave Box
ZCG Sample Stowage #4

Turnover to KSC

<= Launch - 48 Hours
<= Launch - 48 Hours
<= Launch - 28 Hours
<= Launch - 28 Hours
<= Launch - 28 Hours

Power/IVT

No
No
Yes
No
No

Launch Delay*

14 Days
5 Days
3 Days
3 Days
3 Days

Payload (Down)

CGBA
HRF Urine Tube Assembly
PCG-STES #7
PGBA
ZCG Sample Stowage #3

Turnover to Customer

<= Landing + 5.5 Hours
<= Landing + 5.5 Hours
<= Landing + 5.5 Hours
<= Landing + 5.5 Hours
<= Landing + 5.5 Hours

Power

Yes
No
Yes
Yes
No

* Experiment must be removed for refurbishment if the launch is delayed this many days after turnover



Engineering Status

OMRSD / ACOMC

- No pending changes
- No open Waivers or Exceptions
- A review of the Requirements Allocation Matrix has confirmed that all remaining open requirements have been incorporated into the appropriate scheduled procedures for satisfaction

Nonconformances

- All Problem Reports have been closed

Procedures

- All Payload processing procedures have either been released or are scheduled to be released in time to support all applicable “on the shelf” requirements

Launch Commit Criteria

- None



Readiness Certification

Pending successful completion of the remaining scheduled Pad operations, the KSC International Space Station / Payloads Processing Directorate is ready to proceed with launch and on-orbit stage operations for Launch Package 11A.



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Back-Up Material



Acronyms

• ATCS	- Active Thermal Control System
• CETA	- Crew and Equipment Translation Aid
• CGBA	- Commercial Generic Bioprocessing Apparatus
• CSLM	- Coarsening in Solid Liquid Mixtures
• HRF	- Human Research Facility
• ICD	- Interface Control Document
• InSPACE	- Investigating the Structure of Paramagnetic Aggregates from Colloidal Emulsions
• IVT	- Interface Verification Test
• MDM	- Multiplexer/Demultiplexer
• MEIT	- Multi Element Integration Test
• MEPSI	- Microelectromechanical systems based Pico-Satellite Inspector
• NSI	- NASA Standard Initiator
• NTA	- Nitrogen Tank Assembly
• PCG-STES	- Protein Crystal Growth – Single locker Thermal Enclosure System
• PGBA	- Plant Generic Bioprocessing Apparatus
• PMA	- Pump Module Assembly
• PSLIT	- Post Software Load Initialization Test
• SPU/SCA	- Sample Processing Unit/Sample Chamber Assembly
• ZCG	- Zeolite Crystal Growth

STS-113 ISS-16-11A - P1: 3 TCS RADIATORS,CETA CART B, UHF; MEPSI

MASTER MILESTONE SCHEDULE

OPF BAY: 1

PAD: A

ORBITER: 105 ENDEAVOUR

NASA:

S. HIGGINBOTHAM

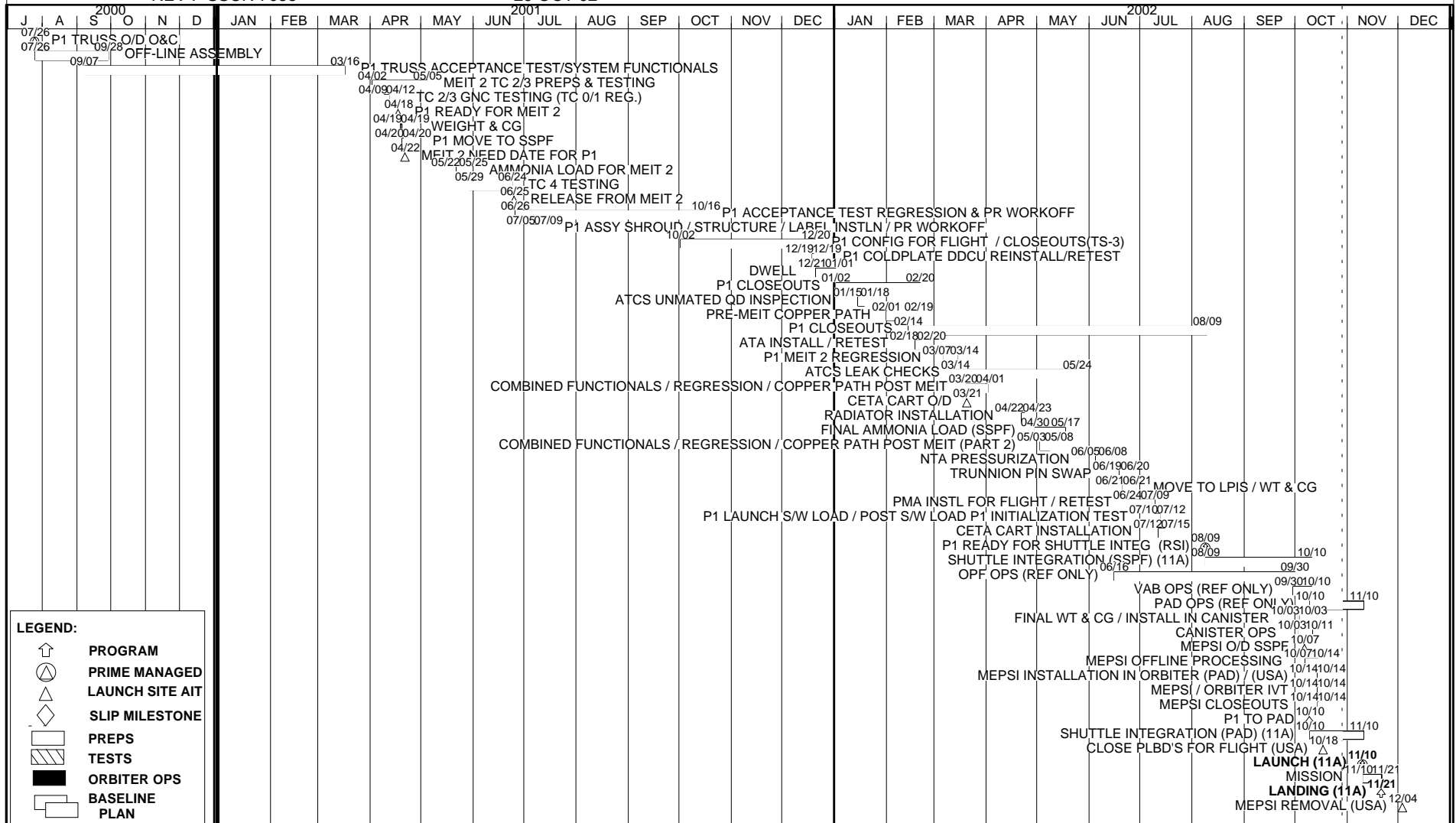
BOEING PGOC:

S. SHANNON

MANIFEST: REV F SSCN 7055

STATUS AS OF: 29 OCT 02

REV: AF



THREATS:

- 1.
- 2.

SS Project Control Scheduling \ F048 \ \PDMS26\ISPPD\ i:\s_work\mms\mms_11a.arp

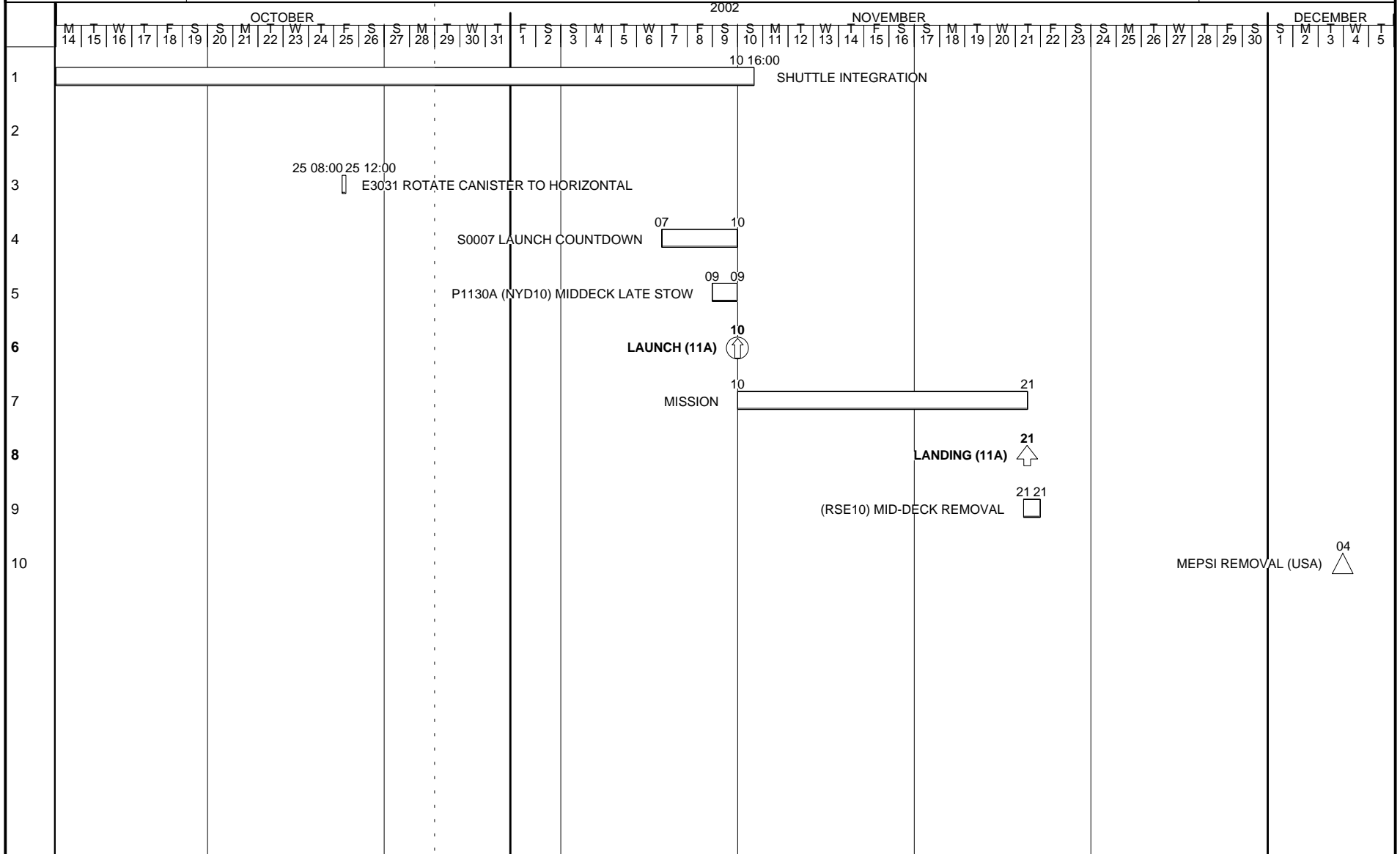
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STS-113 ISS-16-11A - P1: 3 TCS RADIATORS,CETA CART B, UHF; MEPSI

POC: L. MARESCA

SHUTTLE INTEGRATION MINI SCHEDULE

DATE: 29 OCT 02



LEGEND: Program Milestone Level 1 Program Milestone Level 2 Project Milestone Activity Bar (w/Progress) Forecast Testing Local Clear Major Clear Under Review